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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,176	08/27/2003	Hidekazu Arase	5077-000183	4782
27572	7590	11/22/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			SHOSHO, CALLIE E	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			1714	

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/649,176

**Applicant(s)**

ARASE ET AL.

**Examiner**

Callie E. Shosho

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 9/5/06.

**Claim Rejections - 35 USC § 102**

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3-4, 10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumura et al. '928 (U.S. 6,306,928).

The rejection is adequately set forth in paragraph 8 of the office action mailed 6/8/06 and is incorporated here by reference.

**Claim Rejections - 35 USC § 103**

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 8, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura et al. '928 (U.S. 6,306,928) in view of Blease et al. (U.S. 6,585,362).

The rejection is adequately set forth in paragraph 11 of the office action mailed 6/8/06 and is incorporated here by reference.

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6. Claims 1, 3, and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blease et al. (U.S. 6,585,362) in view of Matsumura et al. '966 (U.S. 6,077,966).

The rejection is adequately set forth in paragraph 12 of the office action mailed 6/8/06 and is incorporated here by reference.

### **Response to Arguments**

7. Applicants' arguments filed 9/5/06 have been fully considered but they are not persuasive.

Specifically, applicants argue that Matsumura et al. '928 is not a relevant reference against the present claims given that there is no disclosure in Matsumura et al. '928 of reaction between first compound, second compound, and third compound as required in the present claims where the first compound comprises an alkoxysilane comprising amino group, the second compound comprises alkoxysilane comprising hydrophobic group selected from the group consisting of alkyl, fluoroalkyl, and mixtures thereof, and the third compound comprises alkoxysilane without an amino group.

It is noted that Matsumura et al. '928 disclose that the water-soluble organosilicone is prepared by either (1) hydrolyzing mixture comprising (a) hydrolysable silane that is reaction product of presently claimed first compound with presently claimed third compound and (b) presently claimed second compound or (2) hydrolyzing mixture comprising presently claimed first compound and presently claimed second compound then reacting this hydrolyzate with presently claimed third compound.

Although Matsumura et al. '928 do not disclose process for forming water-soluble substance as presently claimed, it is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the process used to form the water-soluble substance and given that Matsumura et al. '928 disclose water-soluble substance as presently claimed, it is clear that, absent evidence to the contrary, Matsumura et al. '928 meet the requirements of the present claims.

Applicants also argue that there is no suggestion or motivation to combine Matsumura et al. '928 with Blease et al.

Matsumura et al. '928 disclose ink jet ink comprising colorant, humectant, and water-soluble organosilicone, however, there is no disclosure of penetrant as presently claimed. This is why Matsumura et al. '928 is used in combination with Blease et al. which is also drawn to ink jet ink and disclose the use of penetrant in ink jet ink in order to help the ink penetrate into substrate.

Given that Blease et al. is drawn to same field of endeavor as Matsumura et al. '928 and given that Blease et al. provide motivation to use penetrant in ink jet inks, it is the examiner's position that the combination of Matsumura et al. '928 with Blease et al. is proper.

Applicants also argue that there is no motivation to combine Blease et al. with Matsumura et al. '966 given that Blease et al. is drawn to ink jet ink for use on relatively non-porous substrate while Matsumura et al. '966 described compound for use in heavy paint and finishes for construction materials such as porous wood and wood composites.

It is noted that Blease et al. disclose ink jet ink comprising water, colorant, humectant, and penetrant. Blease et al. further disclose that other additives are included in the ink including waterfastness agents (col.5, lines 61-62 and 64). However, there is no disclosure of water-soluble substance as presently claimed. This is why Blease et al. is used in combination with Matsumura et al. '966 that disclose water-soluble silicone compound prepared by hydrolysis of alkyl trialkoxysilane (corresponding to presently claimed second compound), alkoxysilane without amino group (corresponding to presently claimed third compound) and amino-containing alkoxysilane (corresponding to presently claimed first compound) in order to produce coating with water resistance.

While it is agreed that there is no disclosure in Matsumura et al. '966 of ink jet ink, it is noted that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it maybe in a different field of endeavor, it is one which, because of the matter with

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which it deals, logically would have commended itself to an inventor's attention in considering his problem." Matsumura et al. '966 is, therefore, a reasonably pertinent reference, because it teaches the use of water-soluble silicone compound to impart water resistance to porous materials, which is a function especially pertinent to the invention at hand where it is important that inks, which are printed on porous substrate, i.e. paper, possess good water resistance so that the ink does not smudge, smear or run.

Thus, given that Blease et al. disclose ink comprising waterfastness agent, given that Matsumura et al. '966 is a "reasonably pertinent" reference which teaches the use of waterfastness agents such as water-soluble silicone compound as presently claimed in order to impart water resistance to porous materials and given that inks are used on porous materials such as paper, it is the examiner's position that the combination of Blease et al. with Matsumura et al. '966 is proper.

**Allowable Subject Matter**

8. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5-7 would be allowable if rewritten in independent form as described above given that there is no disclosure or suggestion in Matsumura et al. '928 (U.S. 6,306,328), Blease et al., (U.S. 6,585,362), or Matsumura et al. '966 (U.S. 6,077,966) of ink comprising colorant, humectant, water, and water-soluble substance that is condensation polymerized in the absence of water wherein the water-soluble substance is hydrolyzate formed by reaction of a first

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compound that is alkoxysilane comprising amino group, third compound that is alkoxysilane without amino group and (i) second compound that is alkoxysilane comprising fluoroalkyl group as required in present claim 5 or (ii) second compound that is alkoxysilane comprising both alkyl group and fluoroalkyl group as required in present claims 6-7.

**Conclusion**

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
11/17/06